CLAIMS:

1. A method of encoding an audio signal by representing at least part of said audio signal by a plurality of sinusoids, the method comprising the steps of:

- performing an analysis on a first segment of said audio signal;
- selecting candidate sinusoids based on said analysis;
- defining for at least one of the candidate sinusoids a local frequency band around said candidate sinusoid's frequency;
- combining amplitudes of frequency components within said local frequency band from which at least one of the candidate sinusoids within said local frequency band is excluded; and
- selecting said candidate sinusoid as a selected sinusoid in dependence on the combination of amplitudes.

2. A method as claimed in claim 1, wherein a bandwidth of said local frequency band around said candidate sinusoid's frequency is defined in dependence on said candidate sinusoid's frequency.

3. A method as claimed in claim 2, wherein said dependence on said candidate sinusoid's frequency is based on a human's perception of audio.

4. A method as claimed in claim 1, wherein said candidate sinusoid is selected as a selected sinusoid when its amplitude is significant with regard to said combination of amplitudes, which significance is evaluated by thresholding a difference between said candidate sinusoid's amplitude and a weighted mean amplitude of frequency components within said candidate sinusoid's local frequency band from which at least one of the candidate sinusoids within said local frequency band is excluded.

5. A method as claimed in claim 1, wherein said candidate sinusoid is selected as a selected sinusoid when its amplitude is significant with regard to said combination of amplitudes, which significance is evaluated by thresholding a ratio of:

- a difference between said candidate sinusoid's amplitude and a weighted mean amplitude of frequency components within said candidate sinusoid's local frequency band from which at least one of the candidate sinusoids within said local frequency band is excluded; and
- a weighted deviation of the amplitudes of frequency components within said local frequency band from which at least one of the candidate sinusoids within said local frequency band is excluded.

6. A method as claimed in claim 1, wherein the method further comprises a further selection out of the selected sinusoids which comprises the steps of:
- determining for at least one of the selected sinusoids a phase consistency defined by an extent to which a phase of said selected sinusoid at a certain moment in time can be predicted from a phase of said selected sinusoid determined at another moment in time; and
- further selecting said selected sinusoid as a further selected sinusoid when its phase consistency is above a predetermined threshold.

7. A method as claimed in claim 6, wherein the determination of said selected sinusoid's phase consistency comprises the steps of:
- segmenting a third segment of said audio signal into at least a first and a second part;
- determining the actual phases of said selected sinusoid in at least the first and the second part;
- using the actual phase in the first part to serve as the input for predicting the actual phase in the second part; and
- determining said selected sinusoid's phase consistency based on a prediction error between the actual phase and the predicted phase in the second part.

8. An audio encoder for encoding an audio signal by representing at least part of said audio signal by a plurality of sinusoids, the audio encoder comprising:
- means for performing an analysis on a first segment of said audio signal;
- means for selecting candidate sinusoids based on said analysis;
- means for defining for at least one of the candidate sinusoids a local frequency band around said candidate sinusoid's frequency;

- means for combining amplitudes of frequency components within said local frequency band from which at least one of the candidate sinusoids within said local frequency band is excluded; and
- means for selecting said candidate sinusoid as a selected sinusoid in dependence on the combination of amplitudes.

9. An audio encoder as claimed in claim 8, wherein the audio encoder is further conceived to perform a further selection out of the selected sinusoids for which further selection the audio encoder further comprises:
- means for determining for at least one of the selected sinusoids a phase consistency defined by an extent to which a phase of said selected sinusoid at a certain moment in time can be predicted from a phase of said selected sinusoid determined at another moment in time; and
- means for further selecting said selected sinusoid as a further selected sinusoid when its phase consistency is above a predetermined threshold.

10. Audio system comprising means for obtaining an audio signal, an audio encoder as claimed in claim 8 or 9 for encoding said audio signal to obtain an encoded audio signal, and a formatting unit for formatting the encoded audio signal into a format suitable for storage and/or transmission.